

Appl. No. 10/748,027
Amdt. dated October 27, 2004
Reply to Office Action of July 27, 2004

REMARKS

Favorable reconsideration is respectfully requested in light of the above amendments and the following comments. Claims 1, 3, 5, 8 and 10 have been amended and claims 2 and 7 have been canceled. No new matter has been added as the amendments are fully supported by the originally filed specification and drawings.

Applicant respectfully traverses the Examiner's rejection of claims 1-5 and 7-10 under 35 U.S.C. §103(a) as unpatentable over Reinhardt, U.S. Patent No. 6,588,446, in view of Johanson et al., U.S. Patent No. 2,462,023. In order to establish a *prima facie* obviousness rejection, it is necessary that the cited combination of references disclose each and every claimed limitation. This has not been accomplished in this case.

In particular, the claimed invention (see, in particular, independent claims 1 and 5) requires that the tire valve nut include a shoulder having a diameter at the upper end of the shoulder that is greater than a diameter at the lower end of the shoulder. In this, upper and lower are used as would be recognized by one of skill in the art to refer to position relative to the wheel in which the tire valve (bearing the tire valve nut) is deployed. Clearly, the lower end of the shoulder is relatively closer to the wheel than is the upper end of the shoulder. The shoulder is inclined from the lower end of the shoulder to the upper end of the shoulder. An O-ring is arranged within the shoulder and is held within the shoulder. The claimed invention further requires that the O-ring elastically deform and enter the valve hole to seal between a valve stem and the valve hole when the tire valve nut is fastened to the valve stem.

The claimed shoulder geometry is shown, for example, in Figure 2(b). Reference herein to the Figure is not intended to be limiting in any fashion, but is merely intended to be illustrative. In Figure 2(b), the shoulder (12) can be seen as having a diameter at its upper end that is larger than a diameter of the shoulder at its lower end. An O-ring (13) is disposed within the shoulder (12).

In contrast, the cited combination fails to describe the claimed shoulder geometry. Moreover, the cited combination fails to disclose that the O-ring (13) elastically deforms and enters the valve hole (31) to form a seal between a valve stem and the valve hole.

Reinhardt discloses a tire valve that includes a valve body (12), a valve base (20), a shoulder (24) and an elastic ring (42). However, both shoulder (24) and elastic ring (42) appear

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to be deployed on the valve body (12) on the inside of wheel (Q) and thus cannot be considered equivalent to the claimed tire valve nut.

Johanson et al. disclose a seal nut (4) having an annular groove (7) and a ring (8) disposed within the annular groove (7). A review of the geometry shown by Johanson et al. reveals that ring (8) is held captive within groove (7) and thus is incapable of elastically deforming and entering a valve hole.

Thus, neither reference can be considered, either individually or in combination, as teaching the claimed invention in which the tire nut has a shoulder that is inclined from a relatively smaller lower end diameter to a relatively larger upper end diameter. Neither reference can be considered as describing an O-ring disposed within the inclined shoulder such that the O-ring elastically deforms and enters the valve hole to form a seal between a valve stem and the valve hole when the tire valve nut is fastened to the valve stem.

Therefore, the cited combination does not disclose each and every claimed limitation, and thus for at least this reason, the rejection is flawed and should be withdrawn. Applicant does not concede that the teachings of the two references can be combined as suggested by the Examiner, particularly as, using a nut and bolt analogy, Reinhardt teaches placing elastic ring (42) on the bolt shaft on the inside of the wheel while Johanson et al. teach placing a ring (8) within an annular groove in the nut on the outside of the wheel. Favorable reconsideration is respectfully requested.

Applicant respectfully traverses the Examiner's rejection of claim 6 under 35 U.S.C. §103(a) as unpatentable over Reinhardt, U.S. Patent No. 6,588,446, in view of Johanson et al., U.S. Patent No. 2,462,023, and further in view of Martin, U.S. Patent No. 6,722,409. Reinhardt and Johanson et al. are distinguished as above. Martin is relied upon to suggest the inclusion of a transmitter. However, Martin fails to remedy the noted shortcomings of Reinhardt and Johanson et al. Thus, the rejection is flawed and should be withdrawn. Favorable reconsideration is respectfully requested.

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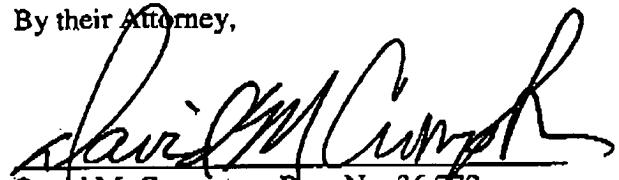
Reexamination and reconsideration are respectfully requested. It is respectfully submitted that all pending claims are now in condition for allowance. Issuance of a Notice of Allowance in due course is requested. If a telephone conference might be of assistance, please contact the undersigned attorney at (612) 677-9050.

Respectfully submitted,

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By their Attorney,

Date: 10/27/04


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